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RAY HUGHES WHITBECK, Editor
Of the Department of Geology and Geography of the University of Wisconsin

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FINLAND

By W. H. TWENHOFEL
University of Wisconsin, Madison

"STRAWBERRY Land," "Land of Heroes," "Last Born Daughter of the Sea," "Land of the Thousand Lakes"; such are the names the Finns delight to call their country. Suomenmaa, the Finnish name for Finland, means a country of swamps, and many thousand square miles fit the name. The name Finland—Fen-land—has the same meaning.

Situation and Size. On the west it touches Norway, Sweden, and the Gulf of Bothnia; on the east, Russia. Seven hundred miles from north to south, four hundred miles from east to west, it embraces an area about equal to that of all Great Britain, plus Holland and Belgium; and is greater by more than 20,000 square miles than all New England plus New York, New Jersey, and Delaware. The area is 144,255 square miles, of which about 11% consists of lakes, and a much greater percentage of swamps and marshes.

With the exception of a few islands and the ends of a few peninsulas, all of Finland is situated north of the parallel of 60 degrees. It holds about the same position in respect to latitude as does the southern end of Greenland, and nearly the whole of it is north of Labrador. The northern portions see the "midnight sun" and "white nights" are characteristic of the whole of Finland.

Geology. Finland appears to be very old. The surface rocks are among the most ancient of the globe, consisting almost wholly of granites, gneisses and schists, whose coarse textures attest their deep-seated origin and the immensity of the erosion which brought them to the surface.

Finland is a part of the Scandinavian plateau, which here varies from 400 to 600 feet above the level of the sea with occasional elevations rising to 2000 feet. The highest point, 4,100 feet, is in the extreme northwest. In general, the relief does not appear to be very great and sharp features are the exception.

GLACIATION. During the time of Pleistocene glaciation the country was deeply buried under great sheets of ice which moved from the northwest to the southeast. These ice masses pushed

the soil accumulations of previous ages to the southward. They were lost to Finland and given to Russia. In place of the soil, were deposited in an irregular manner great heaps of boulders, gravel and sand. Some of these are drumlins, others are moraines, while the road-like ridges, called eskers or osars, are characteristic and abundant features of the surface. Many square miles—particularly the uplands—are absolutely bare of soil, polished masses of solid rock forming the surface, while the erratics, or glacial boulders, in some places are strewn so abundantly that much land is absolutely unfit for any purpose. The numerous depressions created by glacial erosion and the many more made by glacial deposition are now the sites of the numerous lakes and the far more numerous swamps and marshes.

Climate. The summers are short and hot, the winters long and severe. Rainfall is ample, averaging around 10 inches in the north and 25 inches in the south. Most of it falls in August. Daylight in summer for the longest day varies from about eighteen to twenty-four hours. It is said not to be very dark during the long winter nights, the stars and the snow preventing such from being the case.

Natural Beauty. With the going of the frost and snow, vegetation is described as springing up as if by magic and in a few days the country is carpeted with flowers and green. Summer is a riot of beauty. In the forests are the white-stemmed birches in the midst of the dark trunks of the pine and the fir, the former with light-green, round-grouped foliage; the latter with a dark beauty of conical summits of somber green. Vegetation could not thrive more luxuriantly. The cleared land in many places is a gorgeous massing of wild flowers, while lilac and fruit-tree blossoms afford a beautiful setting to the Finnish farmer's home. Early summer sees strawberry blossom in wonderful profusion; mid summer the same places with a red-dotted carpet of the very sweet, but extremely small berries. Polished rock hills rise in the midst of lake, swamp, and forest. Swift flowing streams with clear water and many cataracts and rapids connect the sea with the beautiful island-dotted lakes hidden in the forest. Wild flowers, primitive forests, swamps, lakes, rapid rivers, rocky hills, and the sea make Finland beautiful.

The "white nights" of Finland are full of charming mystery even to those who know their explanation. The darkness is ghostly, and it is little wonder that the Finns have peopled their land with goblins and fairies and that the peasants see these still.

People. To him who has not seen Finland and its people it is likely to be little more than a name, but it is probable that

there is no more interesting people in Europe and there is certainly not a more progressive and delightful one. In a land of which only a small percentage is cultivated or can be cultivated, with a climate extremely severe, only a people of the very best type could have comfortably existed. The Finns, or the Suomi, as they prefer to be called, have done more than exist; they have developed a civilization which in many respects is the equal of any other in Europe, and is certainly the superior of many of them. Finland has looked west not east and, although a people which until recently was a part of Russia, its civilization is not Russian, but that of western Europe. Its association with Sweden is the basis of its civilization. Finland owes nothing of her progress to Russia.

There is much about the Finn that is admirable. He is essentially a conservative and a believer in obedience to law. His honesty and hospitality are proverbial. Bravery, perseverence and an intense love of liberty are attributes of the Finn which his history tells. His mental attitude is reserved. He is slow to anger; but, once aroused, he nurses his wrath for a long time.

The average Finn is not handsome. On the contrary, he is more commonly the opposite; but rarely is his face unpleasing. Beauty of face is perhaps more uncommon in Finland than in most other civilized countries, but the beauty of the inner man shines in the eye of nearly every Finn.

Population. Finland is not a densely populated country and it probably never can be. Beyond its forests, its stone and its limited agriculture, it has no great natural resources. For its unlimited quantities of stone there is no market. Its water power may some day lead to great factories, but that is still in the future. Hence, there is little in the way of natural resources which favors a large population. In 1911, Finland contained 3,154,284 people, about 22 to each square mile.

Cities. In spite of an extremely adverse natural environment, and of having been the battle ground of Russian and Swedish rivalry for 400 years, Finland has developed. Her cities, as Helsingfors and Abo, are clean, progressive and beautiful, particularly Helsingfors. They possess well-paved streets, beautiful parks, and Helsingfors has a number of beautiful buildings. Utilities are as fully modern as in New York or London. Dwelling houses are comfortable, clean and pretty. The country people dwell in clean, modern houses which are either one or two stories high, and nearly every home is said to have its bath house or bath room. The Finn has many kinds of baths, for cleanliness is almost a part of his religion.

Agriculture. The major interest of the people is in agriculture, although lumbering, fishing and commerce receive a great deal of attention. The chief crops are oats, barley, rye and potatoes. Between 8 and 10 per cent of Finland is under cultivation of which a little more than half is meadow. Recent years have seen a great development of the dairy and stock raising industry, one of the chief articles of export of Finland being butter. About the cities a great many people engage in gardening, raising vegetables and small fruits. At Helsingfors, these products are brought to the city in carts and rowboats—the numerous lakes, streams, and the canals making the latter especially useful—and are offered for sale in the open market.

Manufacturing has had a steady development within the last two or three decades, and with the utilization of the abundant water power there is bound to be a much greater development. Textiles, paper, and lumber are the more important products.

Of mining and quarrying, there is little. Copper occurs in a few localities, and it may be that development will prove the deposits to be greater than present indications suggest. A little gold has been washed from the sands of some of the northern rivers, but the quantity has been too small to warrant hopes of ultimately finding important deposits. There is a little bog-iron ore. Of structural stone, Finland has enough to supply the world. This is chiefly granite. Distance from a market prohibits the development of this industry.

Fisheries. The lakes, rivers and the sea contain an abundance of fish, and fishing affords a permanent occupation for a considerable number of people and a part time occupation for many more.

Sailors. Many Finns are sailors. Before the outbreak of the present war, a large percentage of the ships plying the Gulfs of Finland and Bothnia were reported to have been captained, officered, and manned by Finns, and the many boats connecting parts of Petrograd were said to have had officers and part of the crews of similar origin. Judging from statements made to the writer by people of Petrograd, the Finn appears to have an excellent reputation as a sailor.

Education. The literacy of the Finnish people is extremely high, the illiterate apparently being less than 5%. These appear chiefly to be followers of the Greek church. There are many learned societies and before the beginning of the regime of Russification there were forty Finnish periodicals and journals and more than thirty Swedish ones. At the head of the system of

education is the University of Helsingfors. This is open to both men and women and has almost as large an enrollment per capita as most American State Universities.

The people are intensely interested in learning. This is everywhere in evidence, and is particularly attested by the character of the literature handled by the many bookstores of the large cities. There was nothing in Helsingfors that more impressed the writer than the scholarly character of the books handled by these stores. He has not seen anything in any American city which is comparable.

For the last decade prior to the war, the educational system has had an uncertain future. The deadening weight of Russian autocracy was beginning to make itself felt. Nicholas II, false to his pledges to Finland, had permitted the Russification of this delightful people to make headway. A Russian had been made chancellor of their famous University; Russian officials were being placed in charge of the civil administration; prominent men were being sent to Siberia and a rigid censorship had led to the suppression of several of the Finnish journals.

Contrasts. Before the war, one could best appreciate Finland by entering the country from the Russian side. In that way the excellencies of Finland were emphasized because of the glaring defects of Russia. One had a feeling of relief on leaving the deadening, poison-like, filthy atmosphere of Russia behind and reaching a country where the aspect was that of cleanliness, the open field and freedom. The contrast was noticeable as soon as the station of the Finnish railways (most of the railway lines are state owned) was reached. The ticket was sold with proverbial Yankee efficiency. The station was clean and the officials answered questions without delay or compromise. The beggars, the slowness and the characteristic "nitchevo" of the Russian were wanting.

Boarding the train, it rolled out of Petrograd and passed through the country to the northwest. The houses were tumbledown affairs, built of logs and covered with reed or straw-thatched roofs. The inhabitants, both sexes, were dirty, were commonly barefooted, and such clothes as they wore were commonly not clean. Everything had a primitive appearance. Suddenly the whole aspect changed and the change was synchronous with the passage of the train over the Finno-Russian boundary which, as a knife edge, divides civilization from unnatural primitiveness. The houses on the Finnish side of the boundary were neat and clean in appearance, the roofs were of shingle or tin, the houses had seen paint, many of them had telephones, the

fields had the appearance of being intelligently cultivated and many were well drained. The country people wore shoes, their clothes were clean and they had the aspect of being able to look "the whole world in the face" and of fearing "not any man."

Helsingfors was reached. The streets were straight and clean. They were paved, not with cobblestones, but with modern pavement. The sidewalks were wide. The people were clear-eyed, clean-skinned and nicely dressed. The many parks were filled with mothers and their children; the former were knitting, sewing or reading, the latter playing on the grass. Instead of numerous saloons, there were bookshops. Drunkenness, which was rife in Reval, Wesenberg, Petrograd, and other Russian cities visited by the writer, was not noticeable. Beggars, so common in Petrograd, were not to be seen. Electric street cars, clean and modern, rivalled those of any American city.

A Russian and a Finnish City. There is probably nothing that more strongly brings out the difference between Finland and Russia than a comparison of the conditions in Helsingfors and those of the city of Reval in Russia. In 1910 the former had a population of a little more than 150,000, the latter a population of about 100,000. The former has numerous modern paved streets, the latter has none; the people of the former have a clean, neat and contented appearance, the people of the latter an almost opposite aspect; the former has a modern electric transportation system, the latter has about five miles of railway with three or four cars, each small and pulled by a single horse; the former has highly educated people with a small percentage of illiterates; the latter an extremely illiterate people with only a small percentage with even the rudiments of an education.

What is responsible? The natural advantages, and the trade and manufactures of Reval are the equal if not the superior of those of Helsingfors. There is little difference in the type of people. The explanation is to be sought in the Russian and Finnish governments.

The Conquest by Russia. Legend states that the Finns formerly dwelt along the Volga and were driven northward by the migrating Slavs. Ultimately they were Christianized by the Swedes and for 500 years Finland was Swedish territory. During the last 400 years of this period Finland was the battle ground for Swedish and Russian armies. Time after time the land was devastated and thousands of people were killed in battle or died of starvation and exposure. Short intervening periods of peace permitted recuperation of the population and the rebuilding of

homes. The Russian frontier gradually advanced over Finland and in 1809, following a complete Swedish defeat at the hands of Russia, Finland became a Russian province, the Finns being guaranteed their religion, their laws and their constitution. This pledge Russia religiously maintained until the reign of the recently deposed Czar, Nicholas II. He was taking from the Finns their liberties one by one, and the Russification of this progressive people was well on the way. Their ablest journals were being suppressed, their ablest men were being sent to prison or to Siberia, creatures of Russian bureaucracy were being placed in positions of power, and a decade more would probably have seen Finland reduced to the degraded condition of an ordinary Russian province.

The Future. What the future holds for Finland no one can say. The Russian Revolution interrupted the process of Russification and Finland was quick to seize her opportunity. If left alone she would no doubt have taken her place as a valued member in the world's family of nations. At the present, however, she seems to have been released from one autocratic rule, but to fall into the hands of a different one. She cannot hope for much from Germany. It is certain that German rule will be equally as deadening to the Finnish people as would have become the Russian one. It is to be hoped that events will so shape themselves that Finland may be left to work out her own destiny, which, if one may judge from her past, will be ably done, and that her present and her past oppressors may rise from their offenses to become sister nations in a world of changed ideals.

THE NATURAL RESOURCES OF AUSTRALIA

By Stephen S. Visher.

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THE people of Australia are nearly all optimistic concerning the prospects of their continent. When we consider the resources which they list, we see that there is considerable reason for optimism. An area nearly as great as that of the United States, occupied by less than 5,000,000 persons, ought to afford each family a considerable opportunity. To be sure, much of the area is not valuable, but they are quick to point out that only one fourth of the area of the United States is tilled, and much is hopelessly arid, while large sections are marshy, rugged, or stony. Australia is rich in more than area. Most of the continent is a plain; most of the soil is remarkably fertile; the mineral wealth is very great and "scarcely scratched"; the climate is acclaimed

as delightful; water-power possibilities on the eastern highlands are alluring.

Productive Land

It is generally conceded that one of the most significant facts in regard to any area is the extent of its land capable of producing food, clothing, and wood in competition with other areas. Australia possesses a total area of nearly 3,000,000 square miles. At present less than one percent of this huge area is in crops. It is estimated that twenty times the present tilled acreage could be cultivated successfully with present methods. Vast areas, as good or better than most of the land now tilled, are held in enormous estates and given over to grazing. However, means of breaking up these estates are being seriously considered, and various methods have already been tried. Attempts at state purchase and resale to settlers have been mostly unsuccessful because of the inflated valuations involved. A classification by experts of all lands according to the use they can best be put to, and then a differential tax, and in many cases a heavy one, is being urged as the most likely method of forcing proper use of the land.

Another large proportion of arable land not now tilled will be when railroads, roads, wells, and other improvements of like nature are more widely accomplished. Of late progress has been made by the state in supplying areas with such necessities, and in aiding settlers in the clearing of their land of brush (scrub).

Farming Conditions

The use of farming methods adapted to dry regions is becoming more and more general. One of the interesting adaptations is the header-harvester. The straw of grains varies greatly in length with variations in rainfall. In semi arid regions it is often too short to be bound into bundles by a harvester. The header, evolved in Australia, but now widely used in our western states, avoids this difficulty by cutting off the heads of the grain and delivering them to a box-rack driven along side, or directly to a separator which promptly threshes out the grain. This invention made possible a considerable extension of wheat culture into the belt where droughts are frequent. The marked increase in the price of wheat is another factor of great significance in extending the area in which wheat can be grown profitably.

Just how large the area is that can be used successfully for crop growing depends ultimately on the moisture requirements of the crops adapted to the soil and temperature. On the assumption that in a mild temperate climate, twenty inches of rain will support agriculture of the type practiced in Australia, it is semi-officially estimated there is available for crops 480,000 square

miles, (307,000,000 acres) or 16% of Australia. This area is larger than Germany and Austria-Hungary combined, and nearly equal to the combined areas of North and South Dakota, Nebraska, Kansas, Oklahoma, Missouri, and Indiana. It is, indeed, only 10% less than the combined cultivated acreage of Europe, Russia excepted. Such comparisons as these are one basis for Australian optimism.

In the vast area, (84% of the continent) which does not now appear to be available for ordinary agriculture, large areas will be grazed.

Irrigation has been practiced for decades in favorable localities on the lee side of the Dividing Range, especially in New South Wales. Recently some important projects have been undertaken by the government. One of the most notable projects in the world is that near Berembed, where 250,000 acres will soon be irrigated. Many smaller areas will be reclaimed in years to come, some by artesian wells, as there is an extensive region in which artesian water can be obtained.

Animal Industries

Australia long has been the greatest wool producing country in the world, and it supplied 33% of the world's export in 1913. Since the advent of refrigeration ships, the number of cattle has been increased rapidly, and now the meat and dairy products exported are far more valuable than the hides, skins and tallow which were formerly the only animal products exported besides wool. Now, too, the export of "frozen" rabbits and rabbit skins is an appreciable item—nearly $5,000,000 in 1913. The rearing of goats, scarcely commenced, is sure to be greatly extended in the future since there are wide areas where no other use can bring so great a return, and the demand for mohair is increasing very rapidly.

Fluctuations of rainfall constitute a very serious obstacle to full utilization of land. In fact little of it can be used to its full capacity since that capacity fluctuates so widely in most of the continent. An area which has an average rainfall of 20 inches may receive 30 inches one year and 10 the next. But with the extension of government-operated railways, and an increase in the shipment of stock from drought-affected areas to ones which are then favorable, with an increase in hay-saving and with more state aid in the way of supplying seed and stock after drought, now going on, it appears likely that much of the land will be used to approximately its capacity during normal years.

Tropical Australia

The tropical part of Australia affords separate problems. As yet it is almost unused since the importation of "colored" labor

is prohibited and whites still find cooler regions more attractive. However, climatic conditions in most of the area are not such as to discourage the hope that areas well adapted to growing sugar, cotton, cocoanuts, and tropical fruits will be used.

Mineral Wealth

Gold was first discovered in 1851 in New South Wales. From time to time, since, new gold fields have been opened up, the last important one being in Western Australia in the 1890's. Australia has held a prominent place as a gold producing country since 1851, ranking second to the United States until 1900, when for three years it led the world. Since then, however, it has declined and has been surpassed by South Africa, as well as by the United States, and is now third. Although a large share of the thousands of millions of gold secured has come from placers, there are many very rich deep-mines which doubtless will continue to yield for a long time, and of course in so new and large a country, new discoveries are sure to be made.

Australia has the largest silver-lead mine in the world, (The Broken Hill Mine in New South Wales) and has ranked next to Mexico and the United States in silver production until recently, when Canada surpassed her.

Although the production of copper, mostly in South Australia, is not large, the known reserve in Mt. Morgan, Queensland, and at other points is so vast as to compare favorably, it is said, with the known reserves in any state of the United States. Tin is mined in four states to a sufficient amount to give Australia a prominent place among the countries of the world in the production of this important metal.

Lead and zinc are produced in large quantities, and the greatly increased output since 1914 suggests that exhaustion is remote.

Coal is mined to the extent of some 13,000,000 tons, (1913) annually, mostly in New South Wales. Large deposits are known also in Queensland and Victoria. The estimate issued by the Twelfth International Congress of Geologists, (1913) in its three volume report on "The Coal Resources of the World," accredits Australia with more than 165 billion tons of coal, a reserve more than 50% greater than the combined known reserves of South America, Africa, and Middle America, and approximately the same as that of Europe, Great Britain and Germany excepted. The location of the coal along the eastern mountain range is an influence supplementing that of rainfall, water power, and harbors which will tend powerfully to keep the eastern side the leading part of the continent.

The Climate

The character of the climate of Australia is a great asset and at the same time the chief handicap. The healthfulness of most of the continent is demonstrated; the winters are so mild that outdoor activities are not interfered with, and no shelter from cold is required by livestock; few fruit growers have any fear of killing frosts; the balminess encourages picnics, which are enjoyed frequently by nearly all; the dry harvest season of the chief wheat growing sections gives to the wheat kernel a brightness and hardness quite unusual for a white-flour wheat, and secure for Australian wheat the highest price paid on the world's market (Liverpool).

The contrast in climate of different parts of the continent increases the variety of the continent's products and thus increases its independence. Corn is the chief crop in Queeensland, where, towards the north, sugar cane, cotton, bananas, and other tropical fruits thrive; subtropical fruits do very well in New South Wales; winter wheat and wool are the chief products of the cooler south, where, however, most temperate zone products are produced.

Variability of climate is appreciated by few; in fact, it is complained about in all parts of the world. Nevertheless, though frequent droughts are the Australians' "family skeleton in the closet," these variations have tended powerfully to stiffen determination, encourage resourcefulness and hardihood, eliminate those who are too easy-going, and encourage the scientific study of climate. It is recognized that Australian studies in meterorlogy and climatology have contributed much to those subjects, surprisingly much when it is recalled how meager the population is, and how brief the history of the settlements.

Other Resources

Of the native plants, grasses have been most significant. There are hundreds of kinds, many highly valuable. Most of the shrubs are of little use. However, one, a "salt bush," is said to give when pastured by sheep a brilliant luster to the wool. This luster is a chief factor in securing for Australian wool the highest price paid. The eucalyptus tree is the chief forest resource of the continent. Though most of the 300 species are small, the "blue-gum" is the world's tallest tree, and much wood is secured from it. One trunk had a diameter of six feet 300 feet from the base, and trees having a height of nearly 400 feet are not very rare. As the wood is hard, it can not be used for ordinary lumber, hence much soft wood is imported. The wood is excellent for poles, railway ties, wharf piling, and paving blocks.

The water power resources of the eastern mountains are much increased by the precipitous escarpment of the Blue Mountains, and perhaps exceed those of our eastern highlands.

Australia has the world's largest artesian basin, and thousands of wells have tapped it, with benefit to settlers in sections where streams and shallow wells are not to be relied on. Unfortunately many wells yield salty water, and hence are not useful for irrigation of ordinary crops. Some of the freshwater flows are so voluminous that an appreciable amount of irrigation is done by their waters.

The harbor of Sidney is one of the very best in the world, and there are several other excellent "bottle" harbors along the eastern coast which are mentioned among the confinent's assets.

The levelness of most of the continent has facilitated travel. After the summit of the eastern mountain range is once crossed progress is little hindered by topographic features, and in many places roads are scarcely necessary, and railways can be built almost perfectly straight for long stretches. There is a section of the trans-continental line, completed Nov. 1917, which has no curve for 330 miles, and only one curve in 430 miles.

Unfettered by Tradition

Another asset of Australia, a result of its remoteness, is the newness of the region so far as white man is concerned. First settled in 1788, the population remained very small until 1825, and in 1851 there were fewer than 480,000 persons on the island. Australia has relatively little of the "dead timber of by-gone ages" to block progress, and although vested interests are strong even in Australia, they, and tradition, have not been the barrier to progress that they are in most countries. Having been settled so late, advantage was taken, both by the colonists and by the British government, of many lessons learned in America and elsewhere, and of discoveries, inventions, and other contributions to civilization, and there was less groping about and less bungling.

Also because of the remoteness, immigration was less diverse, pell-mell, and overwhelming than in America and thus the course of civic development was less disturbed. There was also a selection of immigrants, many of whom were exceptionally daring, independent, and optimistic. These results of remoteness are probably a chief factor in enabling Australia to outstrip, in a few decades, the rest of the world in regard to several important social advances and now to stand at the forefront of the battle line of civilization. Consequently even remoteness must be counted as an asset, as well as a handicap.

THE PROJECT-PROBLEM METHOD IN THE TEACHING OF GEOGRAPHY

By MENDEL E. BRANOM
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WHAT IS A PROJECT-PROBLEM AND HOW SHOULD IT BE SECURED?

A WELL-DEFINED problem, requiring a consideration of much material for its solution, may arise in connection with the study of an exercise in geography. Such a problem may be called a project-problem. This type of problem should not be confused with the "simple-problem" around which the work in geography, in some cases, has been organized. According to the "simple-problem" method, the teacher merely gives the class a problem as an assignment. She may say, for example, "Tomorrow, you will consider whether St. Louis should be compelled to pay twenty cents a ton more for Illinois coal than East St. Louis. You will find material, concerning this problem, on the reference shelf. Class is excused." Her assignment lacks motivation. She has done almost nothing to arouse interest in the problem. The children may begin work on the problem, because they have been taught to obey the teacher. If they eventually become interested in the problem, it will be in spite of, and not because of, the way the problem was secured and assigned.

The project-problem method, not only has all of the advantages of the "simple-problem" method, but is strong where the latter method is weak. An exercise may be given, which will bring out the discriminations in freight and passenger rates to the advantage of East St. Louis, including the "arbitrary" on coal. This exercise may be motivated by an appeal to the newspapers, which state that the Chamber of Commerce recently has engaged Ex-Governor Joseph Folk, for three years, at a salary of $12,000 a year to fight the "coal arbitrary." As a result of this preparatory exercise, the class may secure a real problem in which it is interested. The project-problem, eventually secured, may be practically the same problem that was given by the "simple-problem" method. The way that the problem originates, however, is vital. The child has a personal interest in the project-problem, and actually feels a need for its solution.

THE SOLUTION OF A PROJECT-PROBLEM

After a problem, whether a "simple-problem" given, or a project-problem arising, has been placed in the hands of a class, the steps, involved in the solution of each type of problem, are the same. The superiority of the project problem, however, is

shown by greater enthusiasm in the securing and interpretation of pertinent material. If the problem is "Should St. Louis be compelled to pay twenty cents a ton more for Illinois coal than East St. Louis?" such topics as the following should be discussed: the location of the two cities with respect to the Illinois coal fields; the absolute dependence of both cities on Illinois coal; the Mississippi River barrier, and the heavy expense involved in overcoming this barrier through the construction of bridges; the mutual inter-dependence of the two cities because of their location in the same industrial district; the historical development of transportation giving rise to rate differentiations; the custom prevailing elsewhere under similar conditions; the discrimination against St. Louis with respect to Illinois coal, but no discrimination against East St. Louis with respect to cattle originating west of the Mississippi River; recent rulings, applicable to the St. Louis situation, of the Interstate Commerce Commission.

As a result of the detailed consideration of these topics, the problem may be solved, or the material summarized. It is not necessary that all problems shall be solved. Adults, in many instances, after a detailed consideration of a problem, may merely summarize the material and withhold judgment. Each pupil has a right to his own conclusions, and, after a searching analysis of material, if the problem is not solved, open-mindedness should be encouraged. Whether the members of the class reach definite conclusions, or whether, unwilling to exercise final judgment, they merely have analyzed the material and summarized results, the purpose of the project-problem has been achieved.

Advantages of the Project-Problem Method

The project-problem method has the following advantages: (a) geographic material is considered, as people, in general, consider it, in relation to problems. This method should develop in pupils an ability to interpret the geographic factors involved in problems of timely moment; (b) memory work involved is memory work in relation; (c) the consideration, selection, and elimination of material requires considerable ability in rational thinking; (d) skill in the use of the mother tongue for expressing, as well as for transmitting, thought is developed; (e) since the problem is a personal problem for each pupil, a favorable situation for problem mastery is established; (f) the team work involved in solving problems affords training for the pupils as members of a social group; (g) problems call forth ability, along various lines, thus tending to an harmonious development; (h) the problem method suggests a criterion that will help in determining the relative ability of children.

An apparent weakness of this method is an actual strength. The relative lack of ability of the weak pupils readily is indicated. It is to be expected that a few of the pupils will show marked ability, that a few will show marked inability, that the majority will show ability in the solution of problems. This is the situation, whether children or adults are being considered. The school room practice will differ from the practice of the busy adult group, in that the teacher will strive to develop each individual to the limit of his capacity, while in the after school days, most pupils will have no such guiding hand. In general, provided the right moral and physical qualities are present, and remain present, the pupils, who show marked ability in problem solving, probably will continue to grow until they have become leaders of thought and action among men; the pupils, who show mediocre ability probably will constitute the great class of society, that can weigh intelligently the factors involved in the problems analyzed by the leaders; the pupils, who show marked inability, few in number, probably will be dependent on the preceding two classes, both for leadership and direction. The teacher will attempt to secure a maximum development of each member of the class, but it is an advantage of the method, that, in spite of this attempt, the pupils will tend to fall into groups according to ability.

Difficulties and Dangers of the Project-Problem Method

The greatest difficulty in using the problem method, from the practical standpoint, arises from the inability of pupils and teacher to secure satisfactory and varied material, bearing on the problems. Teaching is bound to be unsatisfactory if there is a class for solving a problem, but little or no material available through the study of which the problem can be solved or considered. Maps, pictures, museum material, supplementary readers, magazine articles, and newspaper clippings, bearing on the important relations of man to his environment in the various countries, should be collected. This nucleus of material, supplemented by any material the pupils can secure, may be the basis for problem solving.

The school material, bearing on a problem, should be placed conveniently for the use of the pupils. It is an unnecessary waste of the pupil's time to give vague directions as to where material can be secured. The project-problem method does not demand that a child shall wander aimlessly through numerous volumes, accidentally stumbling upon pertinent material. The significant thing is not that general material shall be found, but that, from this material, selections shall be made and interpreted to

meet the demands of the problem. Pupils, however, should be encouraged to secure supplementary material. It is a mistake to have numerous duplications of the same reference. As many different references as possible should be secured. Variety rather than uniformity should govern in the selection of supplementary material for problem work. Pupils, reading different articles, will be stimulated differently, and will come to class expecting to make actual contributions. Through the co-operation of all members of the class, the problem should be solved.

With respect to a given areal unit, as Australia, China, or Japan, in some cases it illogically has been assumed that a problem must be raised, the solution of which will involve all factors worth while with respect to the areal unit. Under the guise of a problem, consequently, pupils are permitted to make contributions concerning the areal unit whether related to the solution of the problem or not. Loose, superficial, inaccurate thinking thus is encouraged. The teacher and not the problem method is at fault. Only contributions of significance in solving the problem should be accepted. A class spirit, unwilling to entertain inaccurate or non-pertinent discussions, gradually should develop. If there is other geographic material concerning the country under consideration that should be discussed, this may be taken care of through exercises or other problems. Sub-problems may aid materially in the solution of a project-problem. Sometimes the sub-problems require explanations, which may give rise to other problems and so on. The teacher may make a serious mistake by permitting the class gradually to move from sub-problem to sub-problem until it has lost sight of the original problem. The class is lost. In general, any material not bearing directly on the problem should be rejected, and the sub-sub-problems suggested may be listed for consideration after the study of the project-problem has been completed.

Illustrations of Project-Problems

The following synopses indicate what is meant by project-problems.

Illustration One. Preparatory step: Denmark once offered to sell the Danish West Indies to the United States, but the United States refused to buy; later, the United States wanted to buy the islands but Denmark, under German influences, refused to sell. In 1917 the United States was willing to buy and Denmark was willing to sell. The United States purchased the islands for $25,000,000.

Problem raised: Are the Danish West Indies worth the price?

Materials secured and interpreted: The islands were considered from the standpoint of pastoral, agricultural, mining, fishing, and manufacturing possibilities, from the standpoint of their strategic location in guarding the eastermost entrance to the Caribbean Sea, and the Panama Canal Zone.

Problem Solved: The islands are worth the price because of their strategic importance in helping the United States to watch over its interests in the "American Mediterranean."

Illustration Two. Preparatory Step: A terrible explosion in Halifax Harbor killed hundreds of people and destroyed millions of dollars worth of property.

Problem raised: Of what importance is Halifax to the allies in the present war?

Materials secured and interpreted: Such topics as the following were brought out in the discussion: the location of Halifax with respect to the main route of travel between the United States and Northwest Europe; harborage facilities, character and extent of the hinterland; transportation facilities; industrial establishments.

Problem solved: Halifax is important to the allies because of an excellent harbor, location on an ocean highway of commerce; rail connections with the interior, and essential industrial establishments.

Illustration Three. Preparatory step: A few months ago, the Central Powers started a powerful offensive, looking toward the subjugation of Italy.

Problem raised: Of what value would Italy be to the Central Powers?

Materials secured and discussed: Such factors as position, coastline, population, and resources were discussed.

Problem solved: Italy would be of value to the Central Powers, because of its proximity to Central Europe, its peninsular extent into the Mediterranean, its irregular coastline, its economic resources, and its man power.

Summary

From the discussion, it will be noted that there are four interlocking steps, involved in the project-problem method: (1) preparatory step, involving a consideration of material out of which a problem may arise; (2) a problem is raised and concisely stated; (3) materials pertinent to the solution of the problem are secured and interpreted; and (4) the problem is solved or the material is summarized. All of these steps need not appear in a single recitation. An entire recitation period, for ex-

ample, may be devoted to a discussion of the preparatory material, and the raising of a problem. Several recitations may be given over to a solution of the problem before the last step is reached. It is not believed that the project-problem should be used exclusively in geography teaching. A method, however, that offers so many advantages should receive careful consideration. No geography teacher should be satisfied until she thoroughly has mastered the details of this method.

THE GEOGRAPHY OF PALESTINE

By W. O. Blanchard
University of Wisconsin, Madison

THE land bordering the southern part of the eastern coast of the Mediterranean Sea has been known at different periods by various names. Usually it has borne the same name as that of the most prominent of the tribes, or peoples inhabiting it. Thus, Canaan, from the Canaanites, became, after its conquest by the Israelites, the Land of Israel; later, as the Jews became more prominent, the name Judea appeared; and finally, it came to be known as Palestine, from the Philistines who lived along the southern coast.

As a land rich in historical interest, as the birthplace of three of the world's greatest religions, and the scene of one of the most remarkable geological phenomena of the earth, the rift valley of the Jordan, it would be hard to find another region within such narrow limits, containing so much of interest to the student of history, whether religious, political, or geological.

The present Palestine extends somewhat beyond the historic Dan and Beersheba limits. Reaching from Mounts Lebanon and Hermon in the north, to the great Hajj Road in the south, and from the Mediterranean Sea to the Arabian desert, it embraces a region, roughly rectangular in shape, with an area of about 12,000 square miles, nearly equal to that of the state of Maryland.

The Arabian peninsula, of which Palestine is one of the most productive parts, occupies an intermediate position, not only between three continents, but also between the three oldest civilizations of those continents. Consequently, it had served from time immemorial as a bridge for intercourse between Europe, Asia, and Africa. But, with the coming of the steamship, the building of the Suez Canal, and the discovery of other routes, the traffic was diverted so that today not only are the old caravan routes

* Acknowledgment is made to Prof. F. T. Kelly, University of Wisconsin, for suggestions and material.

largely deserted, but the southern portion of the peninsula, almost within gunshot of the Suej, is as little known as Central Africa.

From this position of retirement, forced upon it by the changes of time and the blighting rule of the Turk, Palestine has again emerged. The recent English campaign there, one of the most interesting of the present war, has attracted the eyes of the world to this almost forgotten land. The geographic influences, which in the past have so greatly influenced Palestine's history, are still operative, and in the present world struggle, have served to develop a type of modern warfare peculiarly adapted to desert conditions.

Though Palestine is largely mountainous, there are four well defined physiographic regions, based upon differences in topography. These regions extend from north to south in roughly parallet belts. Traveling from the Mediterranean Sea eastward to the interior, one crosses, in succession, the coastal plain, the Lebanon mountains, the Jordan valley, and the anti-Lebanon ranges.

The coastal plain, a long, narrow belt of undulating lowland, is interrupted at only one place: at Acre, a westward reaching spur of the Lebanon Range, Mt. Carmel, crosses the plain and forms a rocky promontory overlooking the Mediterranean. To the north, is the narrow plain of Phoenicia, averaging only four or five miles in width. To the south, the coastal belt rapidly widens, forming the plains of Sharon and Philistia. Next to the Mediterranean, the plain is sandy and barren; back towards the foothills, vegetation covers the ground, and orchards and fields of grain vary the monotony.

The coast line is straight, and, in general, unbroken. Even the river mouths are choked with sand bars, much of the deposit being contributed by the Nile and brought from the southwest by along-shore currents. Artificial breakwaters and harbors have been attempted at Gaza, Jaffa, Acre, and Tyre, but they are either not adapted to the needs of modern commerce, or are wilfully neglected. It seems strange that people on such a forbidding coast, should have once risen to be the world's greatest navigators. This may be accounted for by the fact that Phoenicia is largely mountainous, so the people were forced to turn to the sea for a livelihood, and their small trading vessels did not require the deep, well protected harbors and facilities demanded by modern ocean-going steamers. It is a significant commentary on the character of the coast, that all European invading armies, including the one engaged in the present English campaign, have chosen to approach the interior of Palestine, by

the long arduous land route, rather than by water, or at least, not to attempt a sea attack until the interior was in their possession.

The Lebanon Range, with the exception of the diversion making Mt. Carmel, forms a continuous north-south ridge. From a height of seven thousand feet in the north, the altitude decreases to 2,800 in the plains of Galilee; the range disappears south of Beersheba but reappears in the outliers of Sinai on the Red Sea.

The break opposite Acre, making the Plain of Esdraelon, is the only large opening between the Jordan valley and the Mediterranean. The Lebanon Mountains, themselves, are mainly of limestone, with many caves, grottoes, and underground drainage channels. Both mountain flanks are cut by ravines, or wadys: short, straight, and deep on the east, where they descend to the Jordan; long, winding, and shallow on the west, where they seek the Mediterranean. The protection offered by the hills and mountains have made the Lebanon Range the site of many important cities, such as Beersheba and Jerusalem. Upon the crest of the ridge is the famous road of Israel, upon which prophets, kings, and pilgrims traveled to Jerusalem.

To the east of the mountain province, occurs another depression, quite different from the Coastal Plain. The latter is a gently sloping region, the former, a deep fissure, or graben, formed by the enclosure of a part of the ocean bed and a subsequent depression of the bottom. This remarkable rift valley begins at Antioch, to the north of Palestine, includes several rivers and lakes, among them the Jordan River and Dead Sea, passes through the Gulf of Akaba, and Red Sea, and, turning west at Aden, divides. Entering Africa, the west branch contains the African lakes, Rudolf, and Stephania; the south branch forms the great valley containing Albert Edward Nyanza, Tanganyika, and Nyassa. In the Dead Sea region, this fault block has dropped almost half a mile below the plateau. No other portion of the earth, not covered by water, is even three hundred feet below sea level. The trough has a width of from two to fifteen miles, and 160 miles of its length in Arabia are below sea level.

A large part of the valley, especially between Galilee and the Dead Sea, is very fertile, and all is capable of irrigation. The name Jordan, meaning "Down River," is given because of the swiftness of the current, which, near Galilee, has a fall of 40 feet per mile; the average fall between the Sea of Galilee and the Dead Sea is 9 feet per mile,—slightly more than the Colorado of the United States.

The valley is scantily populated, only one city, Jericho, being found in it. The intense summer heat renders it very unhealthful, and most of the people tilling its fertile soil, reside without the valley. The influence of the Jordan and its valley, has been chiefly that of a border and a barrier, rather than an agency promoting intercourse, as most valleys are.

In the matter of transportation, Palestine is served by a railway connecting with the famous Berlin-Bagdad line. Running southward from the junction at Aleppo to Damascus and Mecca, it skirts the western edge of the Syrian desert. South of Galilee a branch line crosses the Jordan valley and the Plain of Esdraelon, reaching the coast of Beirut. A second branch, running south from this line, through the Coastal Plain reaches Beersheba. Jerusalem has long been connected to its port, Jappa, by a short railroad.

The climate of Palestine is typically Mediterranean. The rainfall is light, decreasing from the sea eastward, Jerusalem receiving but twenty-three inches annually. The maximum fall occurs during the winter and early spring and high temperatures are the rule.

The soil is generally fertile, but production is limited by available water supply, and most of the cultivated crops require irrigation. The inner portion of the Coastal Plain, the Jordan Valley, and the portion of the Anti-Lebanons east of the Sea of Galilee, are practically the only parts cultivatable. The greater part of the remainder is covered with pasture in the spring, but is dry and parched through the summer.

Variations in altitude, rainfall, soil, and the presence of barriers, such as deserts and the Jordan Valley, have helped to make and keep Palestine a land of tribes rather than a united people.

Such conditions have made campaigning in this region a difficult problem. With England's life-line to India threatened by the Turks in their attack on the Suez in 1915, a campaign was planned to conquer Palestine and remove the menace. The expedition left the Suez in October, 1917. and, hugging the coast line, moved northward, Beersheba and Jerusalem being the innermost points reached. The troops chosen for this expedition were chiefly Indians and Australians, men accustomed to such a climate.

The coast line, as has been said, made a land invasion necessary, and Egypt was the logical base. For transportation, the camel was called in. Since 1914, the Egyptian Soudan had been sending camels to concentration camps in lower Egypt, where they were drafted for service, the best for "camelry," the others

for ordinary draft purposes. Lines of pipe for water conveyance, and a railroad built as the army advanced, were constructed. Geologists, familiar with the water bearing strata, aided in the location of wells, never once missing their estimated depth of drilling by more than fifty feet, so it is said. Pipe lines from these wells conveyed water to canvas troughs, supported by a double row of stakes. Tanks of water, resembling Prestolite gas tanks, were also strapped on camels and transported.

Much of the country traversed being flat, the fighting was in the open, the main marches were made at night, the men and animals seeking shelter in the wadys by day. The rainy season was late in starting, and the troops suffered greatly from heat, dust, and flies, before the rains brought relief.

After the capture of Gaza, some supplies were brought in by boat, as they were later at Jappa. But all material had to be landed by lighters and handled by hand. A "land ship," or tank, and aeroplanes, were used. The latter when bombing the Turkish positions at the north end of the Dead Sea were flying four hundred feet below sea level. Many of the Turkish positions were protected by the cacti hedges, which were more formidable than the barbed wire used on the western front.

Just a few days before Christmas came the announcement of the success of the campaign as registered by the capture of Jerusalem; Jerico was taken in February, and by this time the troops are well on their way to Damascus. After twelve and a half centuries of Mohammedan control, this land, of such peculiar interest to the followers of Christ, has again passed into Christian hands. Its possible disposition after the war becomes a matter of much speculation.

THE MAGNESITE INDUSTRY OF STEVENS COUNTY, WASHINGTON

By C. E. Cooper
State Normal School, Cheney, Wash.

ACCORDING to Ries, the mineral magnesite is a carbonate of magnesium which contains 47.6% of magnesium. It occurs in veins or masses replacing other rocks rich in magnesium, and in two forms, either the dolomitic or the serpentine form.

The dolomitic is the more important form and the form which is least widely distributed. Up until the beginning of the present war, it was not known that this country possessed extensive deposits of this particular kind of magnesite. We had, previous to

the war, been importing dolomitic magnesite from Austria-Hungary where there are extensive deposits of it. It was brought to our country as ballast in trans-Atlantic vessels. Ries gives the following figures which will show how we depended upon Austria-Hungary for our supply, previous to the present struggle.

In 1913 the U. S. production of magnesite was 9,632 short tons.

In 1913 we imported from Austria-Hungary 163,715 short tons.

The chief use of the dolomitic form is in the making of refractory brick. Some is also used in the manufacture of toilet preparations, medicines, and when mixed with asbestos as a boiler covering. The demand for magnesite increased rapidly with the extension of the steel industry, since it is used in the lining of the furnaces of the steel works. Therefore when the supply from Austria-Hungary was shut off, the manufacturers of armor-plate, naval and other guns, railroad materials, and structural steel were threatened. It became necessary to locate a large available supply without loss of time.

The discovery of the Stevens County deposits may be attributed to Mr. R. S. Talbot of Spokane. The deposit lies in Stevens County near the towns of Chewelah and Valley about 60 miles north of Spokane and in the Huckleberry Mountains. It is a veritable mountain of magnesite and an engineer who has made a survey of one deposit says that at least four million tons of ore are in sight. The mines have been so prosperous that one of the large companies which has been operating just a year has declared a dividend of $30,000.

Over a million dollars is invested by four companies in this field and 350 men are employed in the mining of the ore. The ore is blasted from the mountain side and the broken rock is loaded into auto trucks and wagons and hauled to the railroad. This feature of the work will soon be a thing of the past for a railroad has been built from the mines to Valley where it connects with the Great Northern. About 1000 tons of the crude ore is removed from all the mines in one day. Approximately 75% of it is calcined near the mines and the rest is shipped in the crude form. The calcined mineral brings over four times as much as the crude product and it is only a question of a short time when all of the output will be in the calcined form. Kilns which will produce 300 tons of the calcined magnesite daily are in process of construction. Wood and coal are used chiefly in calcining the ore and after this process is completed the product looks like a whiteish-yellow limestone. It is shipped in paper lined cars to the great eastern steel plants.

FUR SEALS AND THE FUR SEAL FISHERIES

Distribution

THE fur seal formerly had a wide distribution over the earth. In the eighteenth century there was considerable fur sealing in the Antarctic region about the southern shores of South Africa, Australia, and New Zealand. In thirty years, however, the wasteful methods of sealing nearly exhausted this supply. Only very recently have the islands south of Cape Town been protected; the production, though small, increased from 1300 skins to 13,600 between 1902 and 1908. At one time there was a herd of fur seals on the Galapagos Islands which lie in the Pacific west of Equador, but by successive raids these also have been nearly exterminated. Uruguay, by her wise management of sealing on some of her small islands, shows what can be done in a small but profitable way; in 1901 she obtained 13,000 skins worth $100,000 from one island. These islands of the southern hemisphere, however, are of little commercial importance. A few islands in the north Pacific are the center of the fur sealing industry.

Herding

There are three distinct herds in the north Pacific. One small herd breeds on Robben Island, near Japan, and belongs to that country; another breeds on the Commander Islands in the Bering Sea near the peninsula of Kamchatka, and belongs to Russia; the third and largest herd breeds on the Pribilof Islands in the eastern part of Bering Sea and is owned by the United States. The seals of these three herds do not mingle since they are of different species. The seals which are born on the Pribilof Islands return to these islands to breed. The seals from the Russian islands migrate south along the Asiatic coast and those from the Pribilof Islands migrate along the American coast.

The fur seal is to be distinguished from the hair seal which we see in our harbors. Since the fur seal is very skillful on land, it is sometimes called the sea bear. The terms used for a seal community are rather incongruous, although they apply very well in the separate cases. The mature male is called the bull because he is so large. The mature female, or cow, is small and timid, weighing about 75 pounds. The offspring is called a pup because of its playfulness. The immature males are termed bachelors; they live separate from the other seals on the hauling grounds. The assemblage of cows numbering from a few to a hundred to which a male has attached himself is called a harem. A succession of harems on a beach form a rookery and all the seals together make up a herd.

During the winter months, the fur seals are at sea. Early in the spring, beginning with April and extending into early June, the males migrate north to their rookeries. At this time the bull has a fine fur coat, is fat and muscular, and weighs about 400 pounds. As "beachmaster" he is prepared to protect his section of the beach against all strangers. He is especially dangerous at this time and will attack man or beast. The cows come to the rookeries during June and July, select their mates and assemble in harems; the pups when born weigh about 11 pounds. Since there is no food within many miles of the Pribilof Islands, the mother seals must swim from 50 to 100 miles to get food. During their absence of a day or two, the pups have nothing to eat, but when the mothers return, the pups gorge themselves. The bull eats nothing during the breeding season; that is, from April or May till August. The pups congregate in pods where they are somewhat protected from the belligerent males, and here they play together like puppies.

The bachelors, congregated on their hauling grounds, live a rather uneventful life. They are prohibited from entering the breeding grounds, and must even have a separate outlet to the ocean. The bachelors, when three years old, have the best fur. Since the seal is polygamous, a large number of the bachelors can be killed when their fur is at its prime, without impairing the development of the herd. They mature at the age of six and live to the age of twelve or fourteen years.

The bulls are the first to start the winter migration. After four months of fasting and fighting, they become weak and thin. By the end of November, the islands are practically deserted. The pups, now weighing about 50 pounds, leave for their first migration. The next year they return to the hauling grounds as bachelors or to the breeding grounds as immature females to play with the pups.

Legislation

The Pribilof Islands with the valuable herd of seals came into the possession of the United States in 1867 when we bought them from Russia. Before that time, when the Russian American Company monopolized the industry, the fur sealing was carried on indiscriminately. When we purchased the islands, there were 3,000,000 to 4,000,000 seals. Through mismanagement and international complications, the herd was reduced to 150,000 by 1911. This was caused partly by careless and greedy killing of the seals on the islands. Between 1867 and 1910, 2,500,000 skins were taken from the islands. The second and greatest cause was pelagic sealing, or killing the seals at sea. The great loss comes from the

fact that during the warm months the males are on the islands and the females are going back and forth for food. From 70 to 90 per cent of the seals killed at sea were females. Every female killed in this way causes the death of a pup either born or unborn. The Japanese, Russian, and Canadian seal hunters were thus reducing our herd by the thousands.

This necessitated long and laborious arbitration at Paris between Great Britain and the United States. In 1894 it was finally decided to prohibit pelagic sealing within 60 miles of the islands between May 1st and July 1st. The number of seals, however, kept decreasing since Japan and Russia still continued the practice of pelagic sealing. At last, in 1911, all four countries agreed to abolish all such sealing for 15 years. The herd had been reduced so greatly during this time that the United States Government found it necessary to pass a law prohibiting all sealing on the Pribilof Islands until 1917. Since 1912 the herd has shown signs of rapid recuperation.

In 1912 the first reliable enumeration or census of the seals was taken; only estimates had been made up to this time. Figures for bachelors and immature females are not available. In this year there were 164,000 pups and females and 1,360 bulls. By the discontinuance of land sealing for five years and by the prohibiting of pelagic sealing, the numbers increased to 234,000 pups and females and 3,500 bulls in 1916. If no bulls are killed, however, the number will not increase because the excess number of idle, fighting males kills off many of the pups. Beginning with 1917, therefore, the killing of bachelors has been resumed. Until 1926, 5,000 3-year-old males are to be reserved annually. Since the seals are polygamous, it is necessary to retain only one male for about twenty cows. The best method, therefore, of developing the herd is to kill proportionally at all times. This would permit the killing of a large number of the best seals in their prime without checking the increase of the herd.

FLORENCE WHITBECK.

"I pronounce literature the most important of all branches of school education whether it be in China....or East India....or among the Mohammedan nations or in Greece....or in the schools of Boston, New York, St. Louis, and San Francisco....After literature comes geography, meaning by that term what is usually understood by it in the elementary school. After geography comes history.... after history, grammar.
[*Dr. Harris, Forum*, 32:540, 1902.]

A LAUDABLE UNDERTAKING IN GEOGRAPHY

WE have recently received a copy of a 200-page book on the subject "Bay County Past and Present." The Bay county referred to is the county containing Bay City, Michigan. The Superintendent of Schools and certain teachers of the city became convinced that if geography were to be taught effectively in their city local material ought to be brought together for the assistance of the teachers. Principal George E. Butterfield of the McKinley School, with the assistance of the teachers and pupils of the 6th grade geography classes, undertook the preparation of a geography of the local region. The book is more than a geography since it deals with the history and government of the city and county as well as with things that are strictly geographical. The book is excellently illustrated, completely indexed, strongly bound and well printed. It reflects much credit upon those who accomplished the task. We believe that this is just the thing that ought to be done in every city. It has long been our conviction that while general text books of geography are desirable, yet every city should have available for its teachers a published local geography. There is no way of making the geography of distant places and countries so effective as by basing it on well worked-out local studies. Home geography should not be confined to the first year, but type studies in the home region should be a part of the entire course of grade school geography. We think our readers will be interested in the following explanation which appears in the introduction of this local geography of Bay County, Michigan:

"When such a study of Bay County was undertaken two years ago at the request of Superintendent Gause, it was found to be very difficult to get suitable material on the many topics. In some schools there was very little material to be found, because the parents were mostly recent immigrants. In other schools there was a wealth of material to be obtained directly from the pioneers, but there was no way in which this material could be given to the other schools or could be preserved for future classes. The libraries contain much valuable material, but not in a form suitable for use by sixth grade pupils.

"To overcome these difficulties, Mr. Gause suggested that the geography department, with the pupils of the sixth grade, make a detailed study of the county for one year. This would give the pupils an important piece of constructive work to do, and the results could then be published as a text book for use in future classes.

"The method of procedure has been as follows: The sixth grade teachers of geography met at frequent intervals to discuss the work, the sources of material, and to form general outlines for the classes to follow. Beginning in January, 1917, and continuing through May, pupil representatives from each sixth grade in the city met for an hour once a week with the chairman to present reports from their classes, discuss various parts of the work, and decide questions that had arisen By the close of the school year in June, reports of the work of each class had been handed in to the chairman. These reports were sifted, conflicting statements investigated, and sources of all kinds consulted. Many of the pioneer residents were interviewed. Then the work was put in final form for publication.

"It has been our object to have an interesting book. This accounts for many of the stories and illustrations. At the same time we have attempted to make the work as reliable as possible and to record the sources of our information. Lack of time has made it impossible to go to the real sources in many cases.

"We have aimed to place the emphasis on those phases of the work that are significant, but are not at hand for study now. The present industrial and governmental conditions need no text for their study—in fact, ought to have none. The daily paper with its advertisements, statements about business and the industries, and with its proceedings of the Common Council, Board of Education, Board of Supervisors, and of other governmental bodies of the city and county furnish text enough for this part of the work. At the same time it is desired that the personal observation of the pupil be used wherever possible. This can be accomplished by means of individual, group or class excursions and visits to interesting places, to industrial plants, and to the meetings of the Common Council, etc.

"Many suggestions and much valuable information have been received from individual citizens, city and county officials, and the libraries. Many valuable illustrations have been donated at considerable expense by several of our factories and by individuals interested in the success of the book."

A copy of the book may be secured by sending $1.00 to the Board of Education, Bay City, Mich.

THE PROGRESS OF SHIP BUILDING IN THE UNITED STATES

(Extracts from an address by Chairman Hurley of the U. S. Shipping Board in New York, March 26.)

THERE were 37 steel shipyards in America at the time of our entrance into the war. We have located 81 additional steel and wood yards, while 18 other yards have been expanded. Does America realize what this job means? Does it realize what a tribute is paid to its own initiative in this achievement?

We are building in the new and expanded steel yards 235 new steel shipways, or 26 more than at present exist in all the shipyards of England. If we had been content with doing the job in a small way, we might have built a few new yards, and added a little to our capacity. A few ships might have been finished more quickly; but it was the spirit and will of America to do the job in a big way, and the judgment of the country will be vindicated by the results when all these new ways are completed and are turning out ships. Many of these ways have actually been finished. The new industry we have created will make America the greatest maritime nation in the history of the world.

It has been an uphill struggle. I am willing to confess there have been times when we have been discouraged, not at the magnitude of the task, but through a doubt of human ability to accomplish the stupendous work in the short time allowed.

But we have had our moments of elation when we have felt that we were making progress. The record made by the Skinner & Eddy Co., of Seattle, is a case in point. That company laid the keel for an 8,800-ton vessel, which was launched in 64 days. She was delivered to the Fleet Corporation on January 5, and started on the first voyage on January 14. This record accomplishment shows what can be done in live, wide-awake efficient American shipyards.

Then a few days ago we received a telegram from the Moore Shipbuilding Co., of Oakland, Cal., announcing the successful launching of one of their large vessels. Twenty minutes later we received another telegram from the same company announcing the launching of a second ship of the same type, and 40 minutes afterwards a third telegram saying that a third vessel of similar character had gone overboard.

Steel Construction Tonnage.

The total amount of our steel construction program on March 1 was 8,205,708 dead-weight tons. This is made up of 5,160,300

dead-weight tons under contract with the Emergency Fleet Corporation, and 3,045,408 dead-weight tons of requisition vessels.

Of this total steel construction, 2,121,568 dead-weight tons, or approximately 28 per cent, has been completed. Of the amount of steel ships under contract and under requisition, 655,456 dead-weight tons, or approximately 8 per cent, were actually completed and in service on March 1 of this year, nearly a month ago. This amount of floating tonnage exceeds our total output in 1916, including steel, wooden, and sailing vessels, by approximately 50 per cent.

In the yards which we have already completed and those which are nearing completion the progress will be cumulative from this time on.

Thus, while we have been building the yards and training the new forces necessary to construction, we have also been building the ships.

Notwithstanding the difficulties of organization, of the handicaps of bad weather conditions, of transportation embargoes and railroad congestion, nearly as much tonnage has been constructed in American waters in the past three months as by all the other maritime nations of the world combined.

I have refered to the necessity of providing additional facilities for the building of ships. That is, for the creation of new shipyards, for enlarging old ones, for the education of new shipbuilders, and, I may now add, the necssity of providing increased means for obtaining engines, boilers, turbines, and other equipment. At the outset the 37 old steel yards began increasing their capacity until they now have 195 ways as against 162 eight months ago. Thirty additional new steel shipyards are thus being erected, with a total of 203 shipbuilding ways. Thus we now have in the aggregate 67 steel shipyards either wholly or partly engaged in Fleet Corporation work. These yards will have a total of 398 steel building ways. Of these, 35 yards, with 258 ways, are on the Atlantic and Gulf coast; 19 yards, with 66 ways, are on the Pacific; while 13 yards, with 74 ways, are on the Great Lakes.

A year ago wooden shipbuilding in the United States was almost a lost art. We found 24 old wooden shipyards with 73 shipways. The capacity for wooden shipbuilding has been increased until we now have 81 wooden shipbuilding yards, with 332 ways completed or nearing completion.

Assuming that these ways will each produce two standard ships per year, we should turn out about 2,300,000 dead-weight tons of wooden ships annually. These 332 wooden shipbuilding ways, now nearing completion, added to our 398 steel building

ways, will give us a total of 730 berths upon which to build steel and wooden vessels. When you consider that we had only 162 steel building ways a few months ago and 73 wooden shipbuilding ways—a total of 235—an increase is shown of 495 wooden and steel berths on which we can build ships.

The proposal to build ships of concrete was first regarded as a fascinating absurdity. On March 14 there was launched from the yards of the San Francisco Co. the first concrete steamship, a vessel which the builders christened *Faith*. We hope she will exemplify her name.

SINGAPORE

SINGAPORE is a city of a quarter of a million people, pleasantly stretched out for four miles of sea-front on an island that tips the southern end of the Malay Peninsula. There is no other city like Singapore in the whole world.

In the first place, it is the only city of size and importance near the Equator. Singapore lies practically right upon the Line, being only a little over one degree North. It is a very busy, ambitious, thriving center of industry and commerce.

It is one of England's most strategically located military and commercial outposts. In the inter-Imperial plan of future Britain, it is receiving especial consideration because it commands, in matters of strategy, commerce and transportation, the highways between the Orient and the West by way of the Indian Ocean. It has already been provided with a great graving dock big enough to float the biggest steamships, and so qualifies for a place in the projected line of ports connecting the different parts of the British Empire which the Dominions Royal Commission has recommended for special port development in order to make possible the establishment of several world-traversing routes for big ships under Government control, the economies of transportation to take the place of tariff-protection as an economic means of favoring Empire production and commerce. A radio-station with capacity for sending messages to London is planned for Singapore. There are now five submarine cables centering there. It is provided with a strong unit in the chain of fortresses from Portsmouth to Hong Kong.

And it is a commercial *entrepot* market of rapidly growing importance. In 1913, 12,182 ships in overseas trade entered and cleared at Singapore, representing a tonnage of 17,254,953. In 1914 the overseas and local East Indian shipping of all kinds totaled 37,203 with a tonnage of 18,509,668, as if every third ship in the world had made one voyage to Singapore.

Singapore and Hong Kong are both trading markets somewhat artificially established by England in the Far East. To Singapore's harbor, where the ships of all nations gather, have come the spices, the cocoa and copra, the rich vegetable oils, typical products of the ancient Ind, for many years. And, in a decade, there has grown up an enormous export to the West of the rubber coming from the new plantations that are now supplying the world. This, added to the tin, which for several decades has come out of the Straits mines in growing quantities, till now it fills more than half the world's necessities, gives an industrial background to the trade of Singapore and other Straits ports which are commercially tributary to Singapore. In the reverse direction Singapore increasingly is becoming the distributing center of a growing trade in the manufactures of Europe and America. It is a cosmopolitan market, a "free port," and the commercial facilities are at the disposal of the whole world.

Almost as striking as the display of British genius for going to the far ends of the world and doing things, seen at Singapore, is the Chinese capability for enterprise, in a big way, in a foreign land, which one sees everywhere in the Malay Peninsula and the East Indies. [Excerpted from THE AMERICAS, Dec. 1917.]

Professor S. S. Visher, formerly head of the Department of Geography of the State Normal School at Moorehead, Minnesota, has been appointed a member of the Land Classification Service of the United States Geological Survey, and has entered upon his work in certain of the semi-arid regions of the west.

Professor W. R. McConnell of the Geography Department of the Platteville, Wis., Normal School, has been elected head of the Department of Geography in the Teachers Training College, Miami University, Ohio.

Professor E. G. Lange of the Geography Department of the Whitewater Normal School, Wis., has resigned to enter army Y. M. C. A. work.

The Report on Geography to the New England Association of School Superintendents (1901) *says*

"As a source of information valuable in itself and not merely as an instrument, it has no equal among its associated subjects."

"Geography better than other school subjects leads us to a recognition not only of our place in the world, but of our part in its life."

SOUTH AMERICAN NOTES

(Clipped from *The South American* and from *The Americas*)

Great Increase in Latin American Trade

TRADE between the United States and South America is three times as great as in the year before the war.

To Argentina, Chile and Peru the exports have more than trebled; and to Uruguay quadrupled; while to Brazil, Colombia, Ecuador and Venezuela the exports are nearly three times as great as in 1914. To Argentina the total for the eight months ended with August, 1917, is $62,256,000, against $19,649,000 in the same months of 1914; to Brazil $40,157,000, against $15,973,000; to Chile $32,971,000, against $10,800,000 in the corresponding months of 1914.

Imports from each of the South American countries show large increases, but especially those from Argentina, Uruguay, Chile and Peru.

The share which the United States is now supplying of the trade of South America is very much greater than before the war. Merchandise from the United States formed about 30 per cent. of the imports of all South America in 1916 while in 1913 we supplied but 15 per cent of the total imports of that continent. The United States took in the calendar year 1916 approximately 30 per cent. of the exports of South America and in 1913 but 17 per cent.

Manufactures form more than 90 per cent. of our exports to South America and in practically all of these the increase is strongly marked.

Growth of Manufacturing in Brazil

A continuation of the war is likely to result in important developments as regards the manufacture in Brazil of ammunition and other war material, a good deal of which is already being made in the country. The successful manufacture from Brazilian iron ore of high grade steel demonstrates the possibilities of Brazil in this respect, and with the impulse afforded by the difficulties attending the importation of metal products from the belligerents, it is possible that the iron industry in Brazil will become a reality many years sooner than would have been the case if there had been no war. The iron deposits of Brazil are among the largest in the world, but they have hitherto remained dormant owing to their distance from the coal beds, and at the same time owing to the heavy competition offered in the iron markets of the world by pig iron, which has been transported at

low freight rates. There is fresh activity at the iron works of Ipanema, in the State of Sao Paulo (the property of the Government), which has a production of three tons of iron per day. The ore in this section is magnetite, or magnetic oxide of iron, the ore of which gives up to 67 per cent metal; the district has an immense supply of iron and lime within a short distance of the factory. In addition to this, it is announced that the Esperanca iron works at Itabira do Campo, in the State of Minas Geraes, has started another smelter for the production of pig iron, in addition to those already existing there.

A Bumper Coffee Crop for Brazil

All forecasts of the Brazilian Coffee crop for this season agree that it will be very large, and likely, according to some authorities, to beat the record. Santos may export 12,000,000 bags and Rio 5,000,000, both of which figures have been beaten only once before, while Victoria is expected to furnish over a million bags, which is far more than the total for any previous year. Estimates for Bahia and from the less important coffee districts of Parana and the northern states are not available, which is unfortunate, as the forecast of a record crop must evidently have been based upon surprises elsewhere than in Rio and Santos.

The following are the number of bags exported in different years since the beginning of the century from the two principal Brazilian ports of Rio de Janeiro and Santos, and also the total from all ports. These figures are kindly furnished by the New York Coffee and Sugar Exchange, and show very graphically the proportion of the world's coffee which comes through these two Brazilian ports.

Season	World's Crops	Bags Exported From Rio	Santos
1900-1901	15,100,000	2,939,000	7,988,000
1905-1906	14,792,000	3,244,000	6,983,000
1910-1911	14,524,000	2,438,000	8,110,000
1911-1912	17,409,000	2,497,000	9,994,000
1912-1913	16,373,000	2,894,000	8,564,000
1913-1914	19,612,000	2,961,000	10,855,000
1914-1915	17,886,000	2,344,000	9,523,000
1915-1916	19,756,000	3,248,000	11,744,000
1916-1917	16,691,000	1,309,000	9,803,000

COLLEGE STUDENTS' IGNORANCE OF GEOGRAPHY IN 1857

THE following extract from the autobiography of ex-President Andrew D. White of Cornell University is reproduced in Professor O. D. von Engeln's new book, "Concerning Cornell." This is what President White says of his students in the University of Michigan in 1857.

"On arriving at the University of Michigan in October, 1857, I took especial charge of the sophomore class. Among my duties was their examination in modern geography as a preliminary to their admission to my course in history, and I soon discovered a serious weakness in the public-school system. In her preparatory schools the state of Michigan took especial pride, but certainly at that time they were far below their reputation. If any subject was supposed to be thoroughly taught in them it was geography, but I soon found that in the great majority of my students there was not a trace of real knowledge of physical geography and very little of political. With this state of things I at once grappled, and immediately "conditioned" in these studies about nine-tenths of the entering class. At first there were many protests; but I said to my ingenuous youths that no pedantic study was needed, that all I required was a preparation such as would enable any one of them to read intelligently his morning newspaper, and to this end I advised each one of them to accept his conditions, to abjure all learning by rote from text-books, to take up simply any convenient atlas which came to hand, studying first the map of our own country, with its main divisions, physical and political, its water communications, trend of coasts, spurring of mountains, position of leading cities, etc., and then to do the same thing with each of the leading countries of Europe, and finally with the other main divisions of the world. To stimulate their interest and show them what was meant, I gave a short course of lectures on physical geography, showing some of its more striking effects on history; then another course on political geography, with a similar purpose; and finally notified my young men that they were admitted to my classes in history only under condition that, six weeks later, they should pass an examination in geography, full, satisfactory, and final. The young fellows now took their conditions very kindly, for they clearly saw the justice of them. One young man said to me: "Professor, you are entirely right in conditioning me, but I was never so surprised in my life; if there was anything that I supposed I knew well it was geography; why, I have taught it, and very successfully, in a large public school." On my asking him how he taught a subject in which he was so

deficient, he answered that he had taught his pupils to 'sing' it. I replied that if he would sing the answers to my questions, I would admit him at once; but this he declined, saying that he much preferred to accept the conditions. In about six weeks I held the final examinations, and their success amazed us all. Not a man failed, and some really distinguished themselves. They had all gone to work cordially and heartily, arranging themselves in squads and clubs for mutual study and examination on each physical and political map; and it is certain that by this simple, commonsense method they learned more in six weeks than they had previously learned in years of plodding by rote, day after day, through text-books."

ACTIVITIES OF THE CONNECTICUT COUNCIL

THE Connecticut Council of Geography Teachers has recently held an interesting meeting at which the following program was presented:

Business meeting—

The constitution was adopted and the officers were elected.

Addresses—

Dr. Charles F. Brooks of Yale University, "This Old Fashioned Winter."

Mr. George B. Shaefer, Head of the Pedagogical Department and Director of the Practice School of the Bridgeport City Normal School, "The Problem Method of Teaching Geography in the Upper Grades."

Six new members were added to our Council, giving us an initial membership of fifty.

Other members were added to the National Council of Geography Teachers, so that we now have over fifty members in that Council.

Our constitution is based on that of the National Council. In it, Community Councils take the place of State Councils and Community Leaders take the place of State Directors. We hope to have many Community Councils formed and to get them to work up special phases of geography to present at our meetings.

The officers for the coming year are:

President, Charles E. Pratt, Head of Geography Department, State Normal School, New Britain.

Vice President to represent elementary schools, W. Jerold O'Neil, Principal Waterside School, Stamford, Conn.

Vice President to represent normal schools, high schools and colleges, George B. Shaefer, Head of Pedagogical Department and Director of the Practice Schools of Bridgeport City Normal School.

Secretary and Treasurer, Miss Ellen Murnane, Training Teacher in State Normal School, New Britain.

(Signed) Charles E. Pratt.

MEETING OF LOUISIANA GEOGRAPHY TEACHERS

THE geography section of the Louisiana Teachers Association met in Baton Rouge, April 5, with an attendance of 45. It was easily evident from the meeting that interest in both grade geography and high school physical and commercial geography is rapidly increasing in the state. Nearly every first class high school now offers physical geography. The following program was given with President Brassher of Alexandria presiding:

General Topic: How Geography Has Been Affected by the War.

How Geography May Promote International Good Will, Supt. C. C. Henson, Alexandria.

The Value of an Intensive Study of the Geographical Resources of Louisiana, President V. L. Roy, State Normal School.

Teaching in Geography Classes the Conservation of Fuel, Supt. J. T. Peters, Bogalusa.

Suggestive Changes in Geography Teaching as a Response to the Needs of the Present World Crisis

(a) *In Elementary Grades,* Supt. J. M. Gwinn, New Orleans.

(b) *In High Schools,* Mr. C. A. Ives, State High School Inspector.

Committees were appointed to consider and report on outlines for teaching the natural resources of Louisiana and also to prepare a list of the fundamental facts in world geography, the object being to decrease the number of unessential facts now commonly taught.

Dr. F. V. Emerson of the State University explained the purposes of the National Council of Geography Teachers and a number of teachers were enrolled.

The section will meet at New Orleans next year with the State Association. The following officers were elected for the ensuing year:

President, Supt. C. C. Henson, Alexandria.

Vice President, Miss Mabel Brassher, Alexandria.

Secretary, Miss Grace Moore, New Orleans.

RECENT PUBLICATIONS

"The Nation's Business"—A Review

As the title indicates, the magazine treats the big issues in the nation's affairs from the business point of view. Those factors affecting the welfare of the country, be they of local origin or of foreign cause, are discussed thoroughly and in a very illuminating manner. Although many of the contributions are not by authorities but by men appointed to make special investigations, a very large number of the articles are authoritative. Those resulting from special inquiry are quite as reliable.

The editors of the magazine are "free lances." They have but one obligation, namely, to supply clear-cut, accurate, up-to-the-minute information relative to America's business, to the business man. The magazine is published without profit. It is simply the organ of expression of the Chamber of Commerce of the United States, an organization composed of hundreds of Chambers of Commerce and of individual business firms throughout the country. These facts are cited not to advertise the periodical merely for purposes of increasing its subscription list, but just to show why Geography teachers and students can have the utmost confidence in its contents.

A few of the titles appearing in the numbers for 1917 will give some idea of the scope of the work so far as concerns the Geography teacher and student:—

The Potato Crop in the U. S.
New Crops Wait on Rain, and Business on Both—with a map of business conditions
For and Against Daylight Saving
Commercial Courses in Colleges—by several University Presidents
Russian Needs During and After the War
Panama Canal Begins to Pay
Development of Railways, Waterways and Highways
Shipbuilding Conditions in the U. S.
Foreign Trade of the U. S.
Our Job in Porto Rico.

These are but 10 out of no less than 72 attractively written articles of especial interest to the Geographer. Most of them are strikingly illustrated. The style of language is popular and pointed; in some respects it is unique.

For an exposition of *dynamic* Commercial and Economic Geography this journal stands alone. It fits in beautifully with the several magazines devoted to Geography only. It neither

displaces any of the present Geographical publications nor duplicates them. The writer of this review has found it most helpful in many respects and recommends the magazine with a free conscience. Eugene Van Cleef.

PAZ AND PABLO, A STORY OF TWO LITTLE FILIPINOS, by Addie F. Mitchell. The first volume in the series of Children of the World. Price 48 cents. World Book Company, Publishers, Yonkers-on-Hudson, New York.

This little book, which begins a new series for young readers, is designed to open up to them the study of geography and history as living subjects.

Paz (Peace), the little girl, and her brother, Pablo (Paul), are real children; they and their baby sister do all the things which Philippine children do and what they do is told so interestingly that American boys and girls in grades three to five will be anxious to know more about them. The author tells of conditions of living and the customs of the people in our largest island possession.

GEOGRAPHIC FACTORS IN AMERICAN HISTORY. By H. A. Bone. 83 pp. Print Shop: *Ye Highe School,* Sioux City, Iowa, 1917.

This is a laboratory manual to be studied in connection with a course in United States history and deserves a place on the desk of teachers of American history. It contains thirty-seven outlines with suggestions for the study of geographic conditions relating to various topics in history. The "problem" method is used throughout and for this the author is to be commended. These "problems" are based largely on Semple's "American History and Its Geographic Conditions" but many other books are cited for reference. Although the outlines are written primarily for the teacher of history there are many valuable suggestions for the teacher of geography especially if the latter is interested in the "human side." F. E. WILLIAMS.

The 1917 report of the American Sugar Refining Company of New York contains much of interest to the geography teacher. A brief discussion of the sugar situation during the past year, supplemented by graphs, maps and charts, gives up-to-the-minute information regarding this important commodity.

NOTICE—A GEOGRAPHICAL DIRECTORY

WE purpose to make the June number of the Journal of Geography a Geographical Directory. It will be one of the most useful special numbers we have ever issued, a hand book of information to which teachers will refer again and again.

Heretofore we have printed from 500 to 5000 additional copies of our special issues and have seldom had enough to fill the orders that continued to come in. The following Table of Contents will give an idea of what it is proposed to include in the Geographical Directory.

PROPOSED CONTENTS OF THE JUNE ISSUE

Best books on the Teaching of Geography.

Selected Reference Books for Geography Teachers.

Modern text books in Elementary, Physical, Commercial, General, and College Geography.

Books for supplementary reading and reference in the grades and in the high school.

List of atlases, gazetteers and annuals.

Directory of map publishers, lantern slide makers, and dealers in other geographical materials.

Information about maps and other publications of value to geography teachers furnished free or at a small cost by the U. S. government.

A list of magazines which regularly print articles of geographic interest.

British and American Geographical Societies and the geographical magazines published in the English language.

A complete list of articles on the Teaching of Geography found in back numbers of the leading educational magazines.

Other Bibliographies.

A REQUEST

We will esteem it a favor if those receiving this magazine will bring the above notice to the attention of their fellow teachers who may desire to secure copies of the Geographical Directory. 15 cents a copy; a club order of 8 for $1.00 to one address. Send remittance with order to THE JOURNAL OF GEOGRAPHY, Appleton, Wis.